INDEX TO
EXPERIMENTAL MECHANICS
VOLUME 6, 1966

SUBJECT INDEX

Analysis of Brittle-fracture Propagation, An—M. YOSHIKI, T. KANAZAWA and H. ITAGAKI, 458–462 (Sept.).

Analysis of Residual Stresses in Bars and Tubes of Cylindrically Orthotropic Materials—W. A. OLSON and C. W. BERT, 451–457 (Sept.).

Analytic Separation Method for Photoelasticity, An—J. W. DALLY and E. R. ERISMAN, 493–499 (Oct.).

Application of Photoelasticity in a Welding Institute, The—HANS POHL, 251–256 (May).

Application of Scattered-light Photoelasticity to Doubly Connected Tapered Torsion Bars—W. F. SWINSON and C. E. BOWMAN, 297–305 (June).

Application of Ultrasonics to Detection of Fatigue Cracks—S. J. KLIMA, D. J. LESCO and J. C. FRECHE, 154–161 (March).

Applications of Lasers to Photoelasticity—C. E. TAYLOR, C. E. BOWMAN, W. P. NORTH and W. F. SWINSON, 289–296 (June).

Beam-columns, Restrained, Testing Techniques for—M. G. LAY, R. A. AGLIETTI and T. V. GALAMBOS, 1–12 (Jan.).

Beams, Elastic, Thin-walled, of Open Section, Nonlinearly Coupled Vibrations of—WAI K. TSO, 357–361 (July).

Behavior of Elastic Tubes in a Cohesion-free Continuum, the—GERHARD SONNTAG, 508–510 (Oct.).

Biomechanics, Strain-gage Techniques in—VERNE L. ROBERTS, 19A–22A (March).*

Birefringent Coatings, Mirrored, On the Accuracy of Fringe Multiplication with—DOUGLAS BYNUM, JR, 381–382 (July).

Birefringent Coatings and Models, New Method for the Determination of Oblique-incidence Coefficients for—JOSEPH D. HOVANESIAN, 500–501 (Oct.).

Blade-vibration Measurement, High-speed-turbocharger—C. N. FANGMAN, V. A. ZASTROW and J. E. BOBECK, 19A–21A (Nov.).

Bolts, Tightening Characteristics of, Factors Affecting the—A. BRAY and R. LEVI, 409–419 (Aug.).

Bonded Polariscope for Three-dimensional Photoviscoelastic Studies, A—R. PAPIRNO and H. BECKER, 616609– (Dec.).

Bonded Resistance Strain Gages—L. J. WEYMOUTH, J. E. STARR and J. DORSEY, 19A–30A (Apr.). (Chapter II of SESA's Manual on Experimental Stress Analysis.)

Brittle Coatings—G. ELLIS, F. B. STERN and S. J. BARANOWSKI, 19A–24A (Oct.). (Chapter V of SESA's Manual on Experimental Stress Analysis.)

Brittle-fracture Propagation, An Analysis of—M. YOSHIKI, T. KANAZAWA and H. ITAGAKI, 458–462 (Sept.).

Buckling Behavior of Uniformly Heated Thin Circular Shells, The—B. ROSS, N. J. HOFF and W. H. HORTON, 529–537 (Nov.).

Ceramic Materials, Multiaxial-stress Properties of, New Evaluations for—JOSEPH MARIN, 162–170 (March).

Clamping Rings of Arch-bound Commutators, Stress Analysis of—STEPHEN HUSZÁR, 257–265 (May).

Complex-modulus Apparatus, Design Considerations and Analysis of a—RICHARD L. ADKINS, 362–367 (July).

Composite Cylinders, Thin-shell, Experimental Determination of Stiffness Properties of—A. J. FELDMAN, J. TASI and D. A. STANG, 385–394 (Aug.).

Composite Materials, Fiber-reinforced, Effect of Fiber Geometry on Stress in—THOMAS F. MCLAUGHLIN, 481–492 (Oct.).

Composite Materials, Stress-wave Propagation in—B. W. ABBOTT and L. J. BROUTMAN, 383–384 (July).

Composite Structural Materials—FREDERICK J. MCGARRY, 331–336 (June).

Concrete, Dynamic Behavior of—W. GOLDSMITH, M. POLIVKA and T. YANG, 65–79 (Feb.).

Concrete Similitude, Photoelastic, with CR-39 Reinforced with Epoxy and Glass—S. ADAMS, 54–57 (Jan).

Constant-stress, Vacuum Creep-testing Apparatus, A—J. F. WILSON, F. GAROFALO, W. F. DOMIS and E. P. R. REICHE, 555–558 (Nov.).

Crack-propagation Behaviors—A. B. J. CLARK and G. R. IRWIN, 312–330 (June).

Creep of Concentrically Loaded Circular Plates—G. T. TAOKA and O. M. SIDEBOTTOM, 368–375 (July).

Creep-testing Apparatus, A Constant-stress, Vacuum—J. F. WILSON, F. GAROFALO, W. F. DOMIS and E. P. R. REICHE, 555–558 (Nov.).

Crystalline Imperfections and their Role in Plastic Deformation, The Observation of—H. M. OTTE and J. J. HREN, 177–193 (April).

Crystalline Materials, Defects in, and Their Relation to Mechanical Properties—ALAN G. CROCKER, 266–272 (May).

Defects in Crystalline Materials and Their Relation to Mechanical Properties—ALAN G. CROCKER, 266–272 (May).

Deformation and Failure of Granular Media under Three-dimensional Stresses—EDWARD M. LENOE, 99–104 (Feb.).

Deformation of Metals, Dynamic, under High Hydrostatic Pressure—J. D. CHALUPNIK and E. A. RIPPERGER, 547–554 (Nov.).

Deformations and Rupture Criteria under Low-cycles Fatigue—S. V. SERENSEN and R. M. SHNEIDEROVICH, 587–592 (Dec.).

Dependence of Yield Stress on Strain Rate as Determined from Ball-indentation Tests, The—CHI-HUNG MOK, 87–92 (Feb.).

Design Considerations and Analysis of a Complex-modulus Apparatus—RICHARD L. ADKINS, 362–367 (July).

Device for Use in Applying Strain Gages to Cylindrical Specimens, A—T. W. BUTLER and R. L. BLOSS, 528 (Oct.).

Drawing Die, Photoelastic Investigation of Plane Wedge-shaped—Y. OHASHI and K. NISHIKIORI, 171–176 (March).

Dynamic Behavior of Concrete—W. GOLDSMITH, M. POLIVKA and T. YANG, 65–79 (Feb.).
Dynamic Deformation of Metals under High Hydrostatic Pressure—J. D. CHALUPNIK and E. A. RIPPERGER, 547–554 (Nov.).
Dynamic Properties of a Photoviscoelastic Material—ISAAC M. DANIEL, 225–234 (May).
Dynamic Response of Thin Membranes by the Moiré Method, The—WAYNE E. NICKOLA, 593–601 (Dec.).
Dynamic Stress Concentrations Using Photoelasticity and a Laser Light Source—W. P. T. NORTH and C. E. TAYLOR, 337–341 (July).

Effect of Fiber Geometry on Stress in Fiber-reinforced Composite Materials—THOMAS F. MACLAUGHLIN, 481–492 (Oct.).
Effect of Vibration on the Creep of Tensile-test Specimens of the Aluminum Alloy Al-Mg-Si (PA-4)—A. JAKEWLUK and S. ZIEMBA, 511–518 (Oct.)
Effects of Ultrahigh Vacuum on the Response Characteristics of Strain Gages—ROBERT W. HENNY, 420–425 (Aug.).
Elastic Tubes, The Behavior of, in a Cohesion-free Continuum—GERHARD SONNTAG, 508–510 (Oct.).
Elementary Elasticity—D. K. WRIGHT, JR., 19A–25A (Jan.). (Chapter I of SESA's Manual on Experimental Stress Analysis.)
Experimental Determination of Stiffness Properties of Thin-shell Composite Cylinders—A. J. FELDMAN, J. TASI and D. A. STANG, 385–394 (Aug.).
Experimental Investigation of Edge Loading of Thick Cylindrical Shells—R. J. DOHRMANN and K. D. IVES, 350–356 (July).
Experimental Investigation of Residual Stress in Quenched Flat Plates, An—F. O. RATHBUN, JR., and L. F. COFFIN, JR., 519–527 (Oct.).
Extensometers—M. J. LEBOW, 21A–27A (June). (Chapter III of SESA's Manual on Experimental Stress Analysis.)
Eye, the Living, Photoelastic Effect of—FELIX ZANDMAN, 19A–23A (May).*

Factors Affecting the Tightening Characteristics of Bolts—A. BRAY and R. LEVI, 409–419 (Aug.).
Fatigue, Low-cycles, Deformation and Rupture Criteria under—S. V. SERENSEN and R. M. and R. M. SHNEIDEROVICH, 587–592 (Dec.).
Fatigue Configurations, Stress-concentration Factors for—A. R. HUNTER and R. E. BEIBER, 80–86 (Feb.).
Fatigue Cracks, Detection of, Application of Ultrasonics to—S. J. KLIMA, D. J. LESCO and J. C. FRECHE, 151–161 (March).
Fatigue Damage, Cumulative, A Direct Means of Measuring, The-S/N-Fatigue-life Gage—DARRELL R. HARTING, 19A–24A (Feb.).*
Fatigue Test, Full-scale, of Twin-turboprop Transport—T. KAMIYAMA, K. TAKEUCHI, F. SHIMA and K. KITATANI, 194–203 (April).
Fatigue-testing Machines, A Program-control Unit for—C. OSGERBY and R. PEARSON, 22A–25A (Nov.).
Fluid-to-fluid Extrusion of Metals, Tensile and Compression Testing under High Pressures and—ALFRED BOBROWSKY, 403–408 (Aug.).
Full-scale Fatigue Test of Twin-turboprop Transport—T. KAMIYAMA, K. TAKEUCHI, F. SHIMA and K. KITATANI, 194–203 (April).

Gelatin Models for Photoelastic Analysis of Gravity Structures—R. RICHARDS, JR., and R. MARK, 30–38 (Jan.). Discussion by A. J. DURELLI, V. J. PARKS and L. FERRER, 575–576 (Nov.).
Granular Media under Three-dimensional Stresses, Deformation and Failure of—EDWARD M. LENOE, 99–104 (Feb.).
Gravity Structures, Gelatin Models for Photoelastic Analysis of—R. RICHARDS, JR., and R. MARK, 30–38 (Jan.). Discussion by A. J. DURELLI, V. J. PARKS and L. FERRER, 575–576 (Nov.).

High-speed-turbocharger Blade-vibration Measurement—C. N. FANGMAN, V. A. ZASTROW and J. E. BOBECK, 19A–21A (Nov.).
Hole-drilling Strain-gage Method of Measuring Residual Stresses—N. J. RENDLER and I. VIGNESS, 577–586 (Dec.).

Influence of a Space Environment on the Mechanical Behavior of Metals, The—I. R. KRAMER, H. K. SHEN and S. E. PODLASECK, JR., 23–29 (Jan.).
Influence of Strain Rate on Mechanical Properties of 6061–T6 Aluminum under Uniaxial and Biaxial States of Stress—KENNETH G. HOGE, 204–211 (April).
Interferometer Simulating Reinforced Concrete Beams, Photoelastic Analysis with an—STALEY F. ADAMS, 121–122 (Nov.).
Interferometric Method, Stress Distributions in a Semi-infinite Plate Due to a Pin Determined by—M. NISIDA and H. SAITO, 273–279 (May).

j-circle Method, The—ALBRECHT KUSKE, 218–224 (April).

Kinematics of the Continuum, Visual Representation of—AUGUST J. DURELLI, 113–139 (March). Addendum—624 (Dec.).

Laser, Gas, Continuous-wave, Some Techniques for Employing, as a Light Source in Scattered-light Static Photoelasticity—Y. F. CHENG, 431–432 (Aug.).
Laser Light Source, Dynamic Stress Concentrations Using Photoelasticity and—W. P. T. NORTH and C. E. TAYLOR, 337–341 (July).
Lasers, Applications of, to Photoelasticity—C. E. TAYLOR, C. E. BOWMAN, W. P. NORTH and W. F. SWINSON, 289–296 (June).

Mechanical Behavior of Metals, The Influence of a Space Environment on the—I. R. KRAMER, H. K. SHEN and S. E. PODLASECK, JR., 23–29 (Jan.).
Moiré Grid-analyzer Method for Strain Analysis, The—Published in November 1965 issue. Discussion by VINCENT J. PARKS, 287–288 (May).
Moiré Method, Thermal Stresses at High Temperature in Stainless-steel Rings by the—C. A. SCIAMMARELLA and D. STURGEON, 235–243 (May).
Moiré Method, The Dynamic Response of Thin Membranes by the—WAYNE E. NICKOLA, 593–601 (Dec.).
Moiré Patterns of Slope Contours in Flexed Plates—PERICLES S. THEOCARIS, 212–217 (April).

New Evaluations for Multiaxial-stress Properties of Ceramic Materials—JOSEPH MARIN, 162–170 (March).
New Method for the Determination of Oblique-incidence Coefficients for Birefringent Coatings and Models—JOSEPH D. HOVANESIAN, 500–501 (Oct.).
Nonlinearly Coupled Vibrations of Thin-walled Elastic Beams of Open Section—WAI K. TSO, 357–361 (July).
Nonsymmetric Buckle Patterns in Progressive Plastic Buckling—W. H. HORTON, S. C. BAILEY and A. M. EDWARDS, 433–444 (Sept.).
Novel Tensile-testing Machine for Plastic Film—KATSUHIKO ITO and MAKOTO TSUTSUI, 425–430 (Aug.).

Observation of Crystalline Imperfections and Their Role in Plastic Deformation, The—H. M. OTTE and J. J. HREN, 177–193 (April).
On the Accuracy of Fringe Multiplication with Mirrored Birefringent Coatings—DOUGLAS BYNUM, JR., 381–382 (July).
On the Determination of the Sum of the Principal Stresses in Two-dimensional Problems—A. J. DURELLI, V. J. PARKS and A. MULZET, 19A–27A (Sept.).
On Dispersion of Birefringence of Photoelastic Materials—J. T. PINDERA and G. CLOUD, 470–480 (Sept.).
On Fracture of a Thin Spherical Shell under Blast Loading—S. K. GARG and J. SIEKMANN, 39–44 (Jan.).
Optical Phenomena in Photoelastic Models by the Rotation of Principal Axes—HILLAR K. ABEN, 13–22 (Jan.).
Oscillations, Torsional, A Study of System Parameters Affecting Self-excited—JOHN D. KEMPER, 342–349 (July).

Penetration Experiments with Fiberglass-reinforced Plastics—B. P. GUPTA and N. DAVIDS, 445–450 (Sept.).
Photoelastic Analysis of Gravity Structures, Gelatin Models for—R. RICHARDS, JR., and R. MARK, 30–38 (Jan.). Discussion by A. J. DURELLI, V. J. PARKS and L. FERRER, 575–576 (Nov.).

Photoelastic Analysis with an Interferometer Simulating Reinforced Concrete Beams—STALEY F. ADAMS, 121–122 (Nov.).
Photoelastic Concrete Similitude with CR-39 Reinforced with Epoxy and Glass—STALEY F. ADAMS, 54–57 (Jan.).
Photoelastic Effect of the Living Eye—FELIX ZANDMAN, 19A–23A (May).*
Photoelastic Investigation of Plane Wedge-shaped Drawing Die—Y. OHASHI and K. NISHIKIORI, 171–176 (March).
Photoelastic Materials, On Dispersion of Birefrigence of—J. T. PINDERA and G. CLOUD, 470–480 (Sept.).
Photoelastic Models, Optical Phenomena in, by the Rotation of Principal Axes—HILLAR K. ABEN, 13–22 (Jan.).
Photoelastic Research on Dynamic Stresses—ALBRECHT KUSKE, 105–112 (Feb.).
Photoelasticity—DANIEL POST, 19A–38A (Aug.). (Chapter IV of SESA's Manual on Experimental Stress Analysis.)
Photoelasticity, An Analytic Separation Method for—J. W. DALLY and E. R. ERISMAN, 493–499 (Oct.).
Photoelasticity and a Laser Light Source, Dynamic Stress Concentrations Using—W. P. T. NORTH and C. E. TAYLOR, 337–341 (July).
Photoelasticity, Scattered-light, Application of, to Doubly Connected Tapered Torsion Bars—W. F. SWINSON and C. E. BOWMAN, 297–305 (June).
Photoelasticity, Three-dimensional, of the Rotating Body—M. HONDO and H. MIYAMATO, 559–566 (Nov.).
Photoelasticity, Three-dimensional, Stresses in Spheres with Concentric Spherical Cavities under Diametral Compression by Three-dimensional—H. PIH and H. VANDERVELDT, 244–250 (May).
Photoelasticity in a Welding Institute, The Application of—HANS POHL, 251–256 (May).
Photoviscoelastic Analysis of an Asymmetrically Reinforced Circular Cut-out in a Flat Plate Subjected to Uniform Unidirectional Stress—K. LINGAIAH, W. P. T. NORTH and J. B. MANTLE, 617–623 (Dec.).
Photoviscoelastic Material, Dynamic Properties of a—ISAAC M. DANIEL, 225–234 (May).
Photoviscoelastic Model Materials, Remarks on Properties of—JERZY T. PINDERA, 375–380 (July).
Plastic Buckling, Progressive, Nonsymmetric Buckle Patterns in—W. H. HORTON, S. C. BAILEY and A. M. EDWARDS, 433–444 (Sept.).
Plastic Deformation, The Observation of Crystalline Imperfections and Their Role in—H. M. OTTE and J. J. HREN, 177–193 (April).
Plastic Film, Novel Tensile-testing Machine for—KATSUHIKO ITO and MAKOTO TSUTSUI, 426–430 (Aug.).
Plastics, Fiberglass-reinforced, Penetration Experiments with—B. P. GUPTA, and N. DAVIDS, 445–450 (Sept.).
Plates, Circular, Concentrically Loaded, Creep of—G. T. TAOKA and O. M. SIDEBOTTOM, 368–375 (July).
Polariscope, A Bonded, for Three-dimensional Photoviscoelastic Studies—R. PAPIRNO and H. BECKER, 609–616 (Dec.).
Pressure-sensitive-paint Force Transducers—P. R. UKRAINETZ and P. B. HERTZ, 19A–23A (July).
Program-control Unit for Fatigue-testing Machines, A—C. OSGERBY and R. PEARSON, 22A–25A (Nov.).

Recording Photoelastic Stress Meter, A—R. GARDON, R. W. BAYMA and A. WARNICK, 567–570 (Nov.).
Re-examination of Stresses in a Tension Bar with Symmetrical U-shaped Grooves, A—P. D. FLYNN and A. A. ROLL, 93–98 (Feb.).
Remarks on Properties of Photoviscoelastic Model Materials—JERZY T. PINDERA, 375–380 (July).
Residual Stresses, Measuring, Hole-drilling Strain-gage Method of—N. J. RENDLER and I. VIGNESS, 577–586 (Dec.).
Rotation of Principal Axes, Optical Phenomena in Photoelastic Models by the—HILLAR K. ABEN, 13–22 (Jan.).

Separation of Principal Stresses by Means of an Improved Shear-difference Method—ALBRECHT KUSKE, 45–53 (Jan.).
Shear-difference Method, Separation of Principal Stresses by Means of—ALBRECHT KUSKE, 45–53 (Jan.).
Sheli, Spherical, Thin, On Fracture of a, under Blast Loading—S. K. GARG and J. SIEKMANN, 39–44 (Jan.).
Shells, Circular, Thin, Uniformly Heated, The Buckling Behavior of—B. ROSS, N. J. HOFF and W. H. HORTON, 529–537 (Nov.).
Shells, Cylindrical, Thick, Experimental Investigation of Edge Loading of—R. J. DOHRMANN and K. D. IVES, 350–356 (July).
Slope Contours, Moiré Patterns of, in Flexed Plates—PERICLES S. THEOCARIS, 212–217 (April).
-S/N- Fatigue-life Gage: A Direct Means of Measuring Cumulative Fatigue Damage, The—DARRELL R. HARTING, 19A–24A (Feb.)*
Soil, Granular, Unloading Effects in the Dynamic Response of—R. D. STOLL and I. A. EBEIDO, 502–507 (Oct.).
Some Techniques for Employing a Continuous-wave Gas Laser as a Light Source in Scattered-light Static Photoelasticity—Y. F. CHENG, 431–432 (Aug.).
Strain-gage Techniques in Biomechanics—VERNE L. ROBERTS, 19A–22A (March).*
Strain Gages, A Device for Use in Applying, to Cylindrical Specimens—T. W. BUTLER and R. L. BLOSS, 528 (Oct.).
Strain Gages, Bonded, Transient Response of—KOSHIRO OI, 463–469 (Sept.).
Strain Gages, Bonded Resistance—L. J. WEYMOUTH, J. E. STARR and J. DORSEY, 19A–30A (Apr.). (Chapter II of SESA's Manual on Experimental Stress Analysis.)
Strain Gages, Effects of Ultrahigh Vacuum on the Response Characteristics of—ROBERT W. HENNY, 420–425 (Aug.).
Strain Rate, Influence of, on Mechanical Properties of 6061–T6 Aluminum under Uniaxial and Biaxial States of Stress—KENNETH G. HOGE, 204–211 (April).
Strain Rate as Determined from Ball-indentation Tests, The Dependence of Yield Stress on—CHI-HUNG MOK, 87–92 (Feb.).
Strength of Adhesive-bonded Lap Joints with Respect to Change of Temperature and Fatigue—FERENC SZÉPE, 280–286 (May).
Stress, Residual, An Experimental Investigation of, in Quenched Flat Plates—F. O. RATHBUN, JR., and L. F. COFFIN, JR., 519–527 (Oct.).
Stress Analysis of Clamping Rings of Arch-bound Commutators—STEPHEN HUSZÁR, 257–265 (May).
Stress Analysis, X-ray—ECKARD MACHERAUCH, 140–153 (March).
STRESS-concentration Factors for Fatigue Configurations—A. R. HUNTER and R. E. BEIBER, 80–86 (Feb.).
Stress Concentrations, Dynamic, Using Photoelasticity and a Laser Light Source—W. P. T. NORTH and C. E. TAYLOR, 337–341 (July).
Stress Distributions in a Semi-infinite Plate Due to a Pin Determined by Interferometric Method—M. NISIDA and H. SAITO, 273–279 (May).
Stress Meter, Photoelastic, A Recording—R. GARDON, R. W. BAYMA and A. WARNICK, 567–570 (Nov.).
Stress–Strain Relations, Techniques for Measuring, at High Strain Rates—FRANK E. HAUSER, 395–402 (Aug.).
Stress-wave Propagation in Composite Materials—B. W. ABBOTT and L. J BROUTMAN, 383–384 (July).
Stresses, Dynamic, Photoelastic Research on—ALBRECHT KUSKE, 105–112 (Feb.).
Stresses, Plastic, Cyclic, A Study of, at Notch Root—J. H. CREWS, JR., and H. F. HARDRATH, 313–320 (June).
Stresses, Principal, on the Determination of the Sum of the, in Two-dimensional Problems—A. J. DURELLI, V. J. PARKS and A. MULZET, 19A–27A (Sept.).
Stresses, Residual, Analysis of, in Bars and Tubes of Cylindrically Orthotropic Materials—W. A. OLSON and C. W. BERT, 451–457 (Sept.).
Stresses, Thermal, in a Partially Filled Annulus, Temperature Distributions and—A. F. EMERY, C. F. BARRETT and A. S. KOBAYASHI, 602–608 (Dec.).
Stresses, Three-dimensional, Deformation and Failure of Granular Media under—EDWARD M. LENOE, 99–104 (Feb.).
Stresses in Spheres with Concentric Spherical Cavities under Diametral Compression by Three-dimensional Photoelasticity—H. PIH and H. VANDERVELDT, 244–250 (May).

Stresses in a Tension Bar with Symmetrical U-shaped Grooves, A Re-examination of—P. D. FLYNN and A. A. ROLL, 93–98 (Feb.).
Structural Design, Optimum, Survey of—RALPH L. BARNETT, 19A–26A (Dec.).
Structural Loading Actions—A. H. CHILVER, 538–546 (Nov.).
Structural Materials, Composite—FREDERICK J. MCGARRY, 331–336 (June).
Study of Cyclic Plastic Stresses at Notch Root, A—J. H. CREWS, JR., and H. F. HARDRATH, 313–320 (June).
Study of System Parameters Affecting Self-excited Torsional Oscillations, A—JOHN D. KEMPER, 342–349 (July).
Survey of Optimum Structural Design—RALPH L. BARNETT, 19A–26A (Dec.).

Techniques for Measuring Stress-Strain Relations at High Strain Rates—FRANK E. HAUSER, 395–402 (Aug.).
Temperature Distributions and Thermal Stresses in a Partially Filled Annulus—A. F. EMERY, C. F. BARRETT, and A. S. KOBAYASHI, 602–608 (Dec.).
Tensile and Compression Testing under High Pressures, and Fluid-to-fluid Extrusion of Metals—ALFRED BOBROWSKY, 403–408 (Aug.).
Testing Techniques for Restrained Beam-columns—M. G. LAY, R. A. AGLIETTI and T. V. GALAMBOS, 1–12 (Jan.).
Thermal Stresses at High Temperature in Stainless-steel Rings by the Moiré Method—C. A. SCIAMMARELLA and D. STURGEON, 235–243 (May).

Three-dimensional Photoelasticity of the Rotating Body—M. HONDO and H. MIYAMATO, 559–566 (Nov.).
Transducers, Force, Pressure-sensitive-paint—P. R. UKRAINETZ and P. B. HERTZ, 19A–23A (July).
Transient Response of Bonded Strain Gages—KOSHIRO OI, 463–469 (Sept.).
Transient-velocity Gage for Structures—E. G. CHILTON and T. D. WITHERLY, 306–312 (June).
Triaxial-stress Experiment on Yield Condition in Plasticity, A—L. W. HU, J. MARKOWITZ and T. A. BARTUSH, 58–64 (Jan.).

Unloading Effects in the Dynamic Response of Granular Soil—R. D. STOLL and I. A. EBEIDO, 502–507 (Oct.).

Vibration, Effect of, on the Creep of Tensile-test Specimens of the Aluminum Alloy Al-Mg-Si (PA-4)—A. JAKEWLUK and S. ZIEMBA, 511–518 (Oct.).
Visual Representation of the Kinematics of the Continuum—AUGUST J. DURELLI, 113–139 (March). Addendum—624 (Dec.).

X-ray Stress Analysis—ECKARD MACHERAUCH, 140–153 (March).

Yield Condition in Plasticity, A Triaxial-stress Experiment on—L. W. HU, J. MARKOWITZ and T. A. BARTUSH, 58–64 (Jan.).
Yield Stress on Strain Rate as Determined from Ball-indentation Tests, the Dependence of—CHI-HUNG MOK, 87–92 (Feb.).

AUTHOR INDEX

ABBOTT, B. W.—Stress-wave Propagation in Composite Materials, 383–384 (July).
ABEN, HILLAR K.—Optical Phenomena in Photoelastic Models by the Rotation of Principal Axes, 13–22 (Jan.).
ADAMS, STALEY F.—Photoelastic Analysis with an Interferometer Simulating Reinforced Concrete Beams, 121–122 (Nov.).
ADAMS, STALEY F.—Photoelastic Concrete Similitude with CR-39 Reinforced with Epoxy and Glass, 54–57 (Jan.).
ADKINS, RICHARD L.—Design Considerations of a Complex-modulus Apparatus, 362–367 (July).
AGLIETTI, R. A.—Testing Techniques for Restrained Beam-columns, 1–12 (Jan.).

BAILEY, S. C.—Nonsymmetric Buckle Patterns in Progressive Plastic Buckling, 433–444 (Sept.).
BARANOWSKI, S. J.—Brittle Coatings, 19A–24A (Oct.). (Chapter V of SESA's Manual on Experimental Stress Analysis.).
BARNETT, RALPH L.—Survey of Optimum Structural Design, 19A–26A (Dec.).
BARRETT, C. F.—Temperature Distributions and Thermal Stresses in a Partially Filled Annulus, 602–608 (Dec.).
BARTUSH, T. A.—A Triaxial-stress Experiment on Yield Condition in Plasticity, 58–64 (Jan.).
BAYMA, R. W.—A Recording Photoelastic Stress Meter, 567–570 (Nov.).
BECKER, H—A Bonded Polariscope for Three-dimensional Photoviscoelastic Studies, 609–616 (Dec.).
BEIBER, R. E.—Stress-concentration Factors for Fatigue Configurations, 80–86 (Feb.).
BERT, C. W.—Analysis of Residual Stresses in Bars and Tubes of Cylindrically Orthotropic Materials, 451–457 (Sept.).
BLOSS, R. L.—A Device for Use in Applying Strain Gages to Cylindrical Specimens, 528 (Oct.).
BOBECK, J. E.—High-speed-turbocharger Blade-vibration Measurement, 19A–21A (Nov.).

BOBROWSKY, ALFRED—Tensile and Compression Testing under High Pressures, and Fluid-to-fluid Extrusion of Metals, 403–408 (Aug.).
BOWMAN, C. E.—Applications of Lasers to Photoelasticity, 289–296 (June).
BOWMAN, C. E.—Application of Scattered-light Photoelasticity to Doubly Connected Tapered Torsion Bars, 297–305 (June).
BRAY, A.—Factors Affecting the Tightening Characteristics of Bolts, 409–419 (Aug.).
BROUTMAN, L. J.—Stress-wave Propagation in Composite Materials, 383–384 (July).
BUTLER, T. W.—A Device for Use in Applying Strain Gages to Cylindrical Specimens, 528 (Oct.).
BYNUM, DOUGLAS, JR.—On the Accuracy of Fringe Multiplication with Mirrored Birefringent Coatings, 381–382 (July).

CHALUPNIK, J. D.—Dynamic Deformation of Metals under High Hydrostatic Pressure, 547–554 (Nov.).
CHENG, Y. F.—Some Techniques for Employing a Continuous-wave Gas Laser as a Light Source in Scattered-light Photoelasticity, 431–432 (Aug.).
CHILTON, E. G.—Transient-velocity Gage for Structures, 306–312 (June).
CHILVER, A. H.—Structural Loading Actions, 538–546 (Nov.).
CLARK, A. B. J.—Crack-propagation Behaviors, 321–330 (June).
CLOUD, G.—On Dispersion of Birefringence of Photoelastic Materials, 470–480 (Sept.).
COFFIN, L. F., JR.—An Experimental Investigation of Residual Stress in Quenched Flat Plates, 519–527 (Oct.).
CREWS, J. H., JR.—A Study of Cyclic Plastic Stresses at Notch Root, 313–320 (June).
CROCKER, ALAN G.—Defects in Crystalline Materials and Their Relation to Mechanical Properties, 266–272 (May).

DALLY, J. W.—An Analytic Separation Method for Photoelasticity, 493–499 (Oct.).

DANIEL, ISAAC M.—Dynamic Properties of a Photoviscoelastic Material, 225–234 (May).
DAVIDS, N.—Penetration Experiments with Fiberglass-reinforced Plastics, 445–450 (Sept.).
DOHRMANN, R. J.—Experimental Investigation of Edge Loading of Thick Cylindrical Shells, 350–356 (July).
DOMES, W. F.—A Constant-stress, Vacuum Creep-testing Apparatus, 555–558 (Nov.).
DORSEY, J.—Bonded Resistance Strain Gages, 19A–30A (Apr.). (Chapter II of SESA's Manual on Experimental Stress Analysis.)
DURELLI, A. J.—On the Determination of the Sum of the Principal Stresses in Two-dimensional Problems, 19A–27A (Sept.).
DURELLI, A. J.—Discussion of "Gelatin Models for Photoelastic Analysis of Gravity Structures," 575–576 (Nov.).
DURELLI, AUGUST J.—Visual Representation of the Kinematics of the Continuum, 113–139 (March). Addendum—624 (Dec.).

EBEIDO, I. A.—Unloading Effects in the Dynamic Response of Granular Soil, 502–507 (Oct.).
EDWARDS, A. M.—Nonsymmetric Buckle Patterns in Progressive Plastic Buckling, 433–444 (Sept.).
ELLIS, G.—Brittle Coatings, 19A–24A (Oct.). (Chapter V of SESA's Manual on Experimental Stress Analysis.)
EMERY, A. F.—Temperature Distributions and Thermal Stresses in a Partially Filled Annulus, 602–608 (Dec.).
ERISMAN, E. R.—An Analytic Separation Method for Photoelasticity, 493–499 (Oct.).

FANGMAN, C. N.—High-speed-turbocharger Blade-vibration Measurement, 19A–21A (Nov.).
FELDMAN, A. J.—Experimental Determination of Stiffness Properties of Thin-shell Composite Cylinders, 385–394 (Aug.).
FERRER, L.—Discussion of "Gelatin Models for Photoelastic Analysis of Gravity Structures," 575–576 (Nov.).
FLYNN, P. D.—A Re-examination of Stresses in a Tension Bar with Symmetrical U-shaped Grooves, 93–98 (Feb.).
FRECHE, J. C.—Application of Ultrasonics to Detection of Fatigue Cracks, 154–161 (March).

GALAMBOS, T. V.—Testing Techniques for Restrained Beam-columns, 1–12 (Jan.).
GARDON, R.—A Recording Photoelastic Stress Meter, 567–570 (Nov.).
GARG, S. K.—On Fracture of a Thin Spherical Shell under Blast Loading, 39–44 (Jan.).
GAROFALO, F.—A Constant-stress, Vacuum Creep-testing Apparatus, 555–558 (Nov.).
GOLDSMITH, W.—Dynamic Behavior of Concrete, 65–79 (Feb.).
GUPTA, B. P.—Penetration Experiments with Fiberglass-reinforced Plastics, 445–450 (Sept.).

HARDRATH, H. F.—A Study of Cyclic Plastic Stresses at Notch Root, 313–320 (June).
HARTING, DARRELL R.—The -S/N- Fatigue-life Gage: A Direct Means of Measuring Cumulative Fatigue Damage, 19A–24A (Feb.).*
HAUSER, FRANK E.—Techniques for Measuring Stress-Strain Relations at High Strain Rates, 395–402 (Aug.).
HENNY, ROBERT W.—Effects of Ultrahigh Vacuum on the Response Characteristics of Strain Gages, 420–425 (Aug.).
HERTZ, P. B.—Pressure-sensitive-paint Force Transducers, 19A–23A (July).
HOFF, N. J.—The Buckling Behavior of Uniformly Heated Thin Circular Shells, 529–537 (Nov.).
HOGE, KENNETH G.—Influence of Strain Rate on the Mechanical Properties of 6061-T6 Aluminum under Uniaxial and Biaxial States of Stress, 204–211 (April).
HONDO, M.—Three-dimensional Photoelasticity of the Rotating Body, 559–566 (Nov.).
HORTON, W. H.—The Buckling Behavior of Uniformly Heated Thin Circular Shells, 529–537 (Nov.).
HORTON, W. H.—Nonsymmetric Buckle Patterns in Progressive Plastic Buckling, 433–444 (Sept.).
HOVANESIAN, JOSEPH D.—New Method for the Determination of Oblique-incidence Coefficients for Birefringent Coatings and Models, 500–501 (Oct.).

HREN, J. J.—The Observation of Crystalline Imperfections and Their Role in Plastic Deformation, 177–193 (April).
HU, L. W.—A Triaxial-stress Experiment on Yield Condition in Plasticity, 58–64 (Jan.).
HUNTER, A. R.—Stress-concentration Factors for Fatigue Configurations, 80–86 (Feb.).
HUSZÁR, STEPHEN—Stress Analysis of Clamping Rings of Arch-bound Commutators, 257–265 (May).

IRWIN, G. R.—Crack-propagation Behaviors, 321–330 (June).
ITAGAKI, H.—An Analysis of Brittle-fracture Propagation, 458–462 (Sept.).
ITO, KATSUHIKO—Novel Tensile-testing Machine for Plastic Film, 426–430 (Aug.).
IVES, K. D.—Experimental Investigation of Edge Loading of Thick Cylindrical Shells, 350–356 (July).

JAKEWLUK, A.—Effect of Vibration on the Creep of Tensile-test Specimens of the Aluminum Alloy Al-Mg-Si (PA-4), 511–518 (Oct.).

KAMIYAMA, T.—Full-scale Fatigue Test of Twin-turboprop Transport, 194–203 (April).
KANAZAWA, T.—An Analysis of Brittle-fracture Propagation, 458–462 (Sept.).
KEMPER, JOHN D.—A Study of System Parameters Affecting Self-excited Torsional Oscillations, 342–349 (July).
KITATANI, K.—Full-scale Fatigue Test of Twin-turboprop Transport, 194–203 (April).
KLIMA, S. J.—Application of Ultrasonics to Detection of Fatigue Cracks, 154–161 (March).
KOBAYASHI, A. S.—Temperature Distributions and Thermal Stresses in a Partially Filled Annulus, 602–608 (Dec.).
KRAMER, I. R.—The Influence of a Space Environment on the Mechanical Behavior of Metals, 23–29 (Jan.).
KUSKE, ALBRECHT—The j-circle Method, 218–224 (April).
KUSKE, ALBRECHT—Photoelastic Research on Dynamic Stresses, 105–112 (Feb.).
KUSKE, ALBRECHT—Separation of Principal Stresses by Means of an Improved Shear-difference Method, 45–53 (Jan.).

LAY, M. G.—Testing Techniques for Restrained Beam-columns, 1–12 (Jan.).
LEBOW, M. J.—Extensometers, 21A–27A (June). (Chapter III of SESA's Manual on Experimental Stress Analysis.)
LENOE, EDWARD M.—Deformation and Failure of Granular Media under Three-dimensional Stresses, 99–104 (Feb.).
LESCO, D. J.—Application of Ultrasonics to Detection of Fatigue Cracks, 154–161 (March).
LEVI, R.—Factors Affecting the Tightening Characteristics of Bolts, 409–419 (Aug.).
LINGAIAH, K.—Photoviscoelastic Analysis of an Asymmetrically Reinforced Circular Cut-out in a Flat Plate Subjected to Uniform Unidirectional Stress, 617–623 (Dec.).

MACHERAUCH, ECKARD—X-ray Stress Analysis, 140–153 (March).
MACLAUGHLIN, THOMAS F.—Effect of Fiber Geometry on Stress in Fiber-reinforced Composite Materials, 481–492 (Oct.).
MANTLE, J. B.—Photoviscoelastic Analysis of an Asymmetrically Reinforced Circular Cut-out in a Flat Plate Subjected to Uniform Unidirectional Stress, 617–623 (Dec.).
MARIN, JOSEPH—New Evaluations for Multiaxial-stress Properties of Ceramic Materials, 162–170 (March).
MARK, R.—Gelatin Models for Photoelastic Analysis of Gravity Structures, 30–38 (Jan.).
MARKOWITZ, J.—A Triaxial-stress Experiment on Yield Condition in Plasticity, 58–64 (Jan.).
MCGARRY, FREDERICK J.—Composite Structural Materials, 331–336 (June).
MIYAMATO, H.—Three-dimensional Photoelasticity of the Rotating Body, 559–566 (Nov.).
MOK, CHI-HUNG—The Dependence of Yield Stress on Strain Rate as Determined from Ball-indentation Tests, 87–92 (Feb.).
MULZET, A.—On the Determination of the Sum of the Principal Stresses in Two-dimensional Problems, 19A–27A (Sept.).

NICKOLA, WAYNE E.—The Dynamic Response of Thin Membranes by the Moiré Method, 593–601 (Dec.).
NISHIKIORI, K.—Photoelastic Investigation of Plane Wedge-shaped Drawing Die, 171–176 (March).
NISIDA, M.—Stress Distributions in a Semi-infinite Plate Due to a Pin Determined by Interferometric Method, 273–279 (May).
NORTH, W. P.—Applications of Lasers to Photoelasticity, 289–296 (June).
NORTH, W. P. T.—Dynamic Stress Concentrations Using Photoelasticity and a Laser Light Source, 337–341 (July).
NORTH, W. P. T.—Photoviscoelastic Analysis of an Asymmetrically Reinforced Circular Cut-out in a Flat Plate Subjected to Uniform Unidirectional Stress, 617–623 (Dec.).

OHASHI, Y.—Photoelastic Investigation of Plane Wedge-shaped Drawing Die, 171–176 (March).
OI, KOSHIRO—Transient Response of Bonded Strain Gages, 463–469 (Sept.).
OLSON, W. A.—Analysis of Residual Stresses in Bars and Tubes of Cylindrically Orthotropic Materials, 451–457 (Sept.).
OSGERBY, C.—A Program-control Unit for Fatigue-testing Machines, 22A–25A (Nov.).
OTTE, H. M.—The Observation of Crystalline Imperfections and Their Role in Plastic Deformation, 177–193 (April).

PAPIRNO, R.—A Bonded Polariscope for Three-dimensional Photoviscoelastic Studies, 609–616 (Dec.).
PARKS, V. J.—On the Determination of the Sum of the Principal Stresses in Two-dimensional Problems, 19A–27A (Sept.).
PARKS, V. J.—Discussion of "Gelatin Models for Photoelastic Analysis of Gravity Structures," 575–576 (Nov.).
PARKS, VINCENT J.—Discussion on The Moiré Grid-analyzer Method for Strain Analysis, 287–288 (May).
PEARSON, R.—A Program-control Unit for Fatigue-testing Machines, 22A–25A (Nov.).
PIH, H.—Stresses in Spheres with Concentric Spherical Cavities under Diametral Compression by Three-dimensional Photoelasticity, 244–250 (May).
PINDERA, J. T.—On Dispersion of Birefringence of Photoelastic Materials, 470–480 (Sept.).
PINDERA, JERZY T.—Remarks on Properties of Photoviscoelastic Model Materials, 375–380 (July).
PODLASECK, S. E., JR.—The Influence of a Space Environment on the Mechanical Behavior of Metals, 23–29 (Jan.).
POHL, HANS—The Application of Photoelasticity in a Welding Institute, 251–256 (May).
POLIVKA, M.—Dynamic Behavior of Concrete, 65–79 (Feb.).
POST, DANIEL—Photoelasticity, 19A–38A (Aug.). (Chapter IV of SESA's Manual on Experimental Stress Analysis.)

RATHBUN, F. O., JR.—An Experimental Investigation of Residual Stress in Quenched Flat Plates, 519–527 (Oct.).
REICHE, E. P. R.—A Constant-stress Vacuum Creep-testing Apparatus, 555–558 (Nov.).
RENDLER, N. J.—Hole-drilling Strain-gage Method of Measuring Residual Stresses, 577–586 (Dec.).
RICHARDS, R., JR.—Gelatin Models for Photoelastic Analysis of Gravity Structures, 30–38 (Jan.).
RIPPERGER, E. A.—Dynamic Deformation of Metals under High Hydrostatic Pressure, 547–554 (Nov.).
ROBERTS, VERNE L.—Strain-gage Techniques in Biomechanics, 19A–22A (March).*
ROLL, A. A.—A Re-examination of Stresses in a Tension Bar with Symmetrical U-shaped Grooves, 93–98 (Feb.).
ROSS, B.—The Buckling Behavior of Uniformly Heated Thin Circular Shells, 529–537 (Nov.).
SAITO, H.—Stress Distributions in a Semi-infinite Plate Due to a Pin Determined by Interferometric Method, 273–279 (May).
SCIAMMARELLA, C. A.—Thermal Stresses at High Temperature in Stainless-steel Rings by the Moiré Method, 235–243 (May).
SERENSEN, S. V.—Deformation and Rupture Criteria under Low-cycles Fatigue, 587–592 (Dec.).
SHEN, H. K.—The Influence of a Space Environment on the Mechanical Behavior of Metals, 23–29 (Jan.).
SHIMA, F.—Full-scale Fatigue Test of Twin-turboprop Transport, 194–203 (April).
SHNEIDEROVICH, R. M.—Deformation and Rupture Criteria under Low-cycles Fatigue, 587–592 (Dec.).
SIDEBOTTOM, O. M.—Creep of Concentrically Loaded Circular Plates, 368–375 (July).
SIEKMANN, J.—On Fracture of a Thin Spherical Shell under Blast Loading, 39–44 (Jan.).
SONNTAG, GERHARD—The Behavior of Elastic Tubes in a Cohesion-free Continuum, 508–510 (Oct.).
STANG, D. A.—Experimental Determination of Stiffness Properties of Thin-shell Composite Cylinders, 385–394 (Aug.).
STARR, J. E.—Bonded Resistance Strain Gages, 19A–30A (Apr.). (Chapter II of SESA's Manual on Experimental Stress Analysis.)
STERN, F. B.—Brittle Coatings, 19A–24A (Oct.). (Chapter V of SESA's Manual on Experimental Stress Analysis.)
STOLL, R. D.—Unloading Effects in the Dynamic Response of Granular Soil, 502–507 (Oct.).
STURGEON, D.—Thermal Stresses at High Temperature in Stainless-steel Rings by the Moiré Method, 235–243 (May).
SWINSON, W. F.—Application of Scattered-light Photoelasticity to Doubly Connected Tapered Torsion Bars, 297–305 (June).
SWINSON, W. F.—Applications of Lasers to Photoelasticity, 289–296 (June).
SZÉPE, FERENC—Strength of Adhesive-bonded Lap Joints with Respect to Change of Temperature and Fatigue, 280–286 (May).

TAKEUCHI, K.—Full-scale Fatigue Test of Twin-turboprop Transport, 194–203 (April).
TAOKA, G. T.—Creep of Concentrically Loaded Circular Plates, 368–375 (July).
TASI, J.—Experimental Determination of Stiffness Properties of Thin-shell Composite Cylinders, 385–394 (Aug.).
TAYLOR, C. E.—Applications of Lasers to Photoelasticity, 289–296 (June).
TAYLOR, C. E.—Dynamic Stress Concentrations Using Photoelasticity and a Laser Light Source, 337–341 (July).
THEOCARIS, PERICLES S.—Moiré Patterns of Slope Contours in Flexed Plates, 212–217 (April).
TSO, WAI K.—Nonlinearly Coupled Vibrations of Thin-walled Elastic Beams of Open Section, 357–361 (July).
TSUTSUI MAKOTO—Novel Tensile-testing Machine for Plastic Film, 426–430 (Aug.).

UKRAINETZ, P. R.—Pressure-sensitive-paint Force Transducers, 19A–23A (July).

VANDERVELDT, H.—Stresses in Spheres with Concentric Spherical Cavities under Diametral Compression by Three-dimensional Photoelasticity, 244–250 (May).
VIGNESS, I.—Hole-drilling Strain-gage Method of Measuring Residual Stresses, 577–586 (Dec.).

WARNICK, A.—A Recording Photoelastic Stress Meter, 567–570 (Nov.).
WEYMOUTH, L. J.—Bonded Resistance Strain Gages, 19A–30A (Apr.). (Chapter II of SESA's Manual on Experimental Stress Analysis.)
WILSON, J. F.—A Constant-stress, Vacuum Creep-testing Apparatus, 555–558 (Nov.).
WITHERLY, T. D.—Transient-velocity Gage for Structures, 306–312 (June).
WRIGHT, D. K., JR.—Elementary Elasticity, 19A–25A (Jan.). (Chapter I of SESA's Manual on Experimental Stress Analysis.)

YANG, T.—Dynamic Behavior of Concrete, 65–79 (Feb.).
YOSHIKI, M.—An Analysis of Brittle-fracture Propagation, 458–462 (Sept.).

ZANDMAN, FELIX—Photoelastic Effect of the Living Eye, 19A–23A (May).*
ZASTROW, V. A.—High-speed turbocharger Blade-vibration Measurement, 19A–21A (Nov.).
ZIEMBA, S.—Effect of Vibration on the Creep of Tensile-test Specimens of the Aluminum Alloy Al-Mg-Si (PA-4), 511–518 (Oct.).